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Oregon Bankers
Association

Gold

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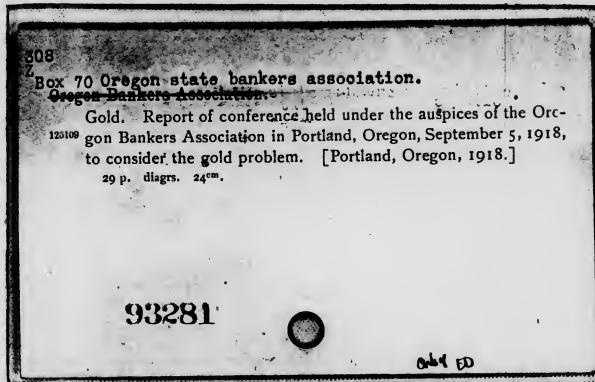
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REPORT OF CONFERENCE
HELD UNDER THE AUSPICES

OF THE

OREGON BANKERS ASSOCIATION
IN PORTLAND, OREGON
SEPTEMBER 5, 1918

TO CONSIDER THE GOLD
PROBLEM

12 March, 1920 - C.R.W.

OREGON BANKERS ASSOCIATION



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EXPLANATORY

ON September 5, 1918, there was held in Portland, Oregon, under the auspices of the Oregon Bankers Association, a meeting to consider the decrease in the gold production of the United States, and to hear addresses from men who had made a study of this matter, in short to inform ourselves regarding what even at that time appeared to us to be a subject worthy of the bankers' most serious attention. The data furnished by the speakers was so interesting that it was determined to pass a resolution authorizing the president to present the matter in suitable form before the American Bankers Association at its September meeting in Chicago, that not only the bankers of the country might be informed, but that co-operation should be had between this great and powerful body and the United States government in working out some suitable plan of restoration of the gold production to at least its pre-war volume.

After the object of our meeting had been attained by the passage of a resolution at the American Bankers Association, it seemed opportune to publish in concise form the more salient features of this original meeting, which we are told was the first of its kind to be held in the United States.

The resolution passed by the Oregon bankers' conference as well as the resolution passed by the American Bankers Association, which you will find published elsewhere in this pamphlet, you will notice did not attempt to make specific recommendations as to how to restore the gold production of the country, it being our thought that we would start discussion amongst the bankers themselves, that a practical way might be found without disturbing the present value or relations of gold to our credits. That the maintenance of the gold standard is fundamental to the bankers' minds hardly needs more than the bare statement, but it probably will be a surprise to anyone who investigates this matter to find that there are many economists and others, who treat very lightly the maintenance of the gold standard; and while they probably would resent the imputation that they believe in fiat money, the ultimate result of their ideas would undoubtedly lead to the theory that a dollar only needs to be stamped by the government, without any other consideration behind it.

We hope that the data as given in the following addresses will be of benefit to the bankers of the country, and will serve as a preliminary to their further investigation of what seems to us a very important subject at this time. In order that the busy man may get quickly the most salient points, the addresses in question have been carefully edited, and it is regretted that they could not be published in full owing to their considerable length.

E. G. CRAWFORD,
President Oregon Bankers Association.

GOLD OUTPUT THREATENED

*In co-operation with the various western metal producers' associations and the American Mining Congress, the Honorable Emmet D. Boyle, Governor of Nevada, called a conference of gold mining interests and economists at Reno on the 12th of August this year, for the purpose of considering practical means for the stimulation and relief of the gold mining industry. The sessions were attended by delegates from twelve of the western states, who authoritatively presented their views regarding the many problems with which the present situation is confronted.

The outstanding thought of the conference, as expressed by many speakers, was that, due to the increased cost of material and labor, this industry as now developed is threatened in its very existence, and that unless some form of assistance from the government is given the producing mines, they will be forced to discontinue operations.

The outcome of the deliberations there was a resolution to be presented in Washington by a specially appointed committee of the American Gold Conference. The resolution, submitted and unanimously ratified as the Council's final declaration, was couched in these terms:

"WHEREAS, Gold production in the United States has declined from one hundred and one million dollars in 1915, to eighty-four million dollars in 1917, with a still greater decrease now taking place, the production of California alone having declined one and a half million dollars in the first six months of the present year; and

WHEREAS, This decrease is principally due to the increased cost and shortage of labor and material, the price of gold, as our standard of value, being fixed by law at the invariable figure of \$20.6718 per ounce, thus being the only important product which has not obtained an increased market price due to the present war conditions; and

WHEREAS, Under present conditions capital cannot be obtained for gold mining, but is generally being withdrawn wherever possible from the said industry; and

WHEREAS, On account of the increased cost of production with no increase at all in the market price of the product, many mines have been

*The condensed address before the Pacific Coast Bankers Conference, Portland, Oregon, presented by John Clausen, vice-president Crocker National Bank, San Francisco.

forced to cease operations in the last six months, many others are now running at a loss, and are about to be closed down and abandoned, and, from their nature, will require years to be re-opened, so that a large portion of the gold mining industry is now threatened with extinction; and

WHEREAS, A war emergency exists, which we are advised by our own government necessitates the maintenance, and if possible the increase of gold production of the United States, as of next importance after food and war munitions, being of vital importance as a basis for our continually expanding credits, which are necessary both for the financing of the war and for reconstruction after the war; and

WHEREAS, The gold resources of the United States are adequate to maintain our former production, and to afford under proper encouragement a substantially increased production; now, therefore, be it

RESOLVED, That it is the sense of this meeting that of all the various measures which have been suggested, the following will be most effective in maintaining and encouraging the production of gold in the United States, namely—Relief by the United States to the gold producers of this country to correspond with the increased cost of production, the extent of such relief to be fixed from time to time to meet changing conditions.

That nothing contained in these resolutions as passed is to be construed as meaning an intention to alter the amount of gold in the dollar, nor to place a premium upon gold."

In support thereof I was privileged to express my views on the intricate problems with which it deals, and I may here be permitted to again voice the statements made on that occasion, that—

No more interesting chapter will be written in economic history than that which deals with the problem of the proper distribution of the world's gold supply. Probably there was never greater need than now for co-operation of our industrial and financial elements to devise a workable plan for control of an increased production of that precious metal.

There are comparatively few who really understand to what a great extent mere credit can be made to do the work of wealth, although the time will come when credit will assuredly break down unless it is built upon a solid foundation. The issue and circulation of paper credits throughout the leading nations of the world has been proportionately far greater than their holdings of gold and has naturally resulted in inflation on an alarming scale.

The thought, however, that Europe may possibly repudiate part of

her war debts for the sake of reducing the amount of currency outstanding against government bonds or notes is obviously superficial. Finance has become an international, rather than a national question and the monetary history of any country tends to become more and more merged in the monetary history of the whole civilized world. International credit is firmly established on a gold basis and unless the flow of gold is not too strong in one direction no country has any interest in upsetting the present standard, although it is contended that notwithstanding a great production of new gold it may not necessarily make universal gold standardism possible, as it would be a mere drop in the bucket of our future needs. If the world's credit, therefore, is to be carried on after the war with gold, every ounce that can possibly be produced will be required.

The production of gold is a vitally essential industry which, for obvious reasons, should be promoted to the fullest extent. It is very apparent, however, that with a fixed value for the yellow metal, together with the rapidly increasing cost of material, labor and transportation, this particular industry as now developed is seriously affected and it would seem inevitable that unless some form of Government relief—but only as a temporary measure—is given to the producing mines, many of them will be compelled to discontinue operations.

There are people who argue that if the Government would agree upon a plan to increase the value of gold from \$20.67 to say \$40 or \$50 a fine ounce, it would make a settlement of obligations possible with only half the metallic requirement otherwise necessary to redeem outstanding paper credits. This course, radical to say the least, would have a disastrous effect upon all credits and especially reflect upon the cost of living, which, in all probability, would climb to limits beyond the reach of the average citizen. Increasing the value of gold or giving it a premium does not necessarily give it a higher purchasing power but, on the other hand, in the final adjustment seriously disrupts the basis of international credit.

When peace comes, all the world will be faced with a period of great financial and industrial uncertainty and to pass through it successfully would be a task that will need all the statesmanship civilization can muster. To increase this uncertainty by tampering with the standard of international payment will be an extraordinarily futile means of handling the situation and would only make the confusion worse confounded.

The principal nations of the world have adopted gold as the basis of their currency system. The market price for it is everywhere the same and everywhere equally certain at the standard price of \$20.67 an ounce. It may be an anomaly that economic civilization should depend for means

of payment on the supply of a particular metal, but it will take much ingenuity to find a practical substitute for gold and secure for it the popularity and confidence that gold now enjoys. The mere fact that it has been chosen by the most enlightened commercial nations is strong proof that it is the best single commodity for practical use as a standard.

The vast obligations piled up by the nations at war; the huge issues of paper currency; the refunding of debts and resumption of specie payments after the war, are among the most urgent and difficult problems with which the world will be confronted. This makes it only too apparent that gold is a necessity for the credit of financial unity of nations and it is therefore essential that an adequate foundation of gold must be created to uphold that system.

One of the first acts of the British Government after England was plunged into war was insure that the gold which was being turned out of the mines should be safe-guarded, and steps were taken for the deposit of their new holdings in Canada, South Africa and Australia to the credit of the Bank of England. This arrangement had many advantages and tended greatly to facilitate the concentration of the metal where it was most needed for the settlement of liabilities and Great Britain has in this way used her gold unsparingly to meet obligations to neutral creditors.

At a meeting held in London, July 4, 1914, by gold producers, Sir Lionel Phillips said:

"The war has had a very serious effect upon the gold mining industry of the world. * * * Why have wages and stores risen? Largely because they are paid for in a paper currency that, owing to inflation, has depreciated. If there had been enough gold to pay for the balance of external trade in the precious metal, exchanges would have remained normal and the creation of paper money, to transfer the predominant part of international trade from the ordinary channels into the hands of the Government, would not have caused the great depreciation that we have witnessed in its value.

"A rise in commodities involves a rise in wages, and vice versa, and thus the snowball of national debt goes on growing from the double cause of expenditure and rising prices. Every thoughtful economist looks to the future with grave misgiving. Debts incurred upon commodities at a high cost must some day be paid for in commodities. * * * We live in a competitive world and shall hence have to meet our obligations in commodities at the cheapest rate at which they can be supplied from any part of the globe. For the extinction of external debt there is only one substitute of commodities—gold. And again, sufficient commodities for the

repayment of huge debts can only be produced, or for the matter, absorbed, in the course of many years, and the deferment in the payment of debt during that period can only be secured, at fair rates, by credit based upon gold.

"We have all read a good deal of specious argument on the subject of the gold standard and its abolition, but the fact remains that, although reputation for national probity is of great worth and permits delay in settling debts, no amount of confidence in the integrity of a debtor and no amount of sophistry about 'liquid wealth' in the shape of raw materials and an industrious population will pay debts. Hard cash, goods, or services of a valuable character are the only considerations acceptable to the creditor. * * * Rates of exchange have little to do with the wealth of a country. They mainly represent the state and tendency of trade balances. The movement of a relatively small amount of gold has a surprisingly large effect upon rates of exchange.

"It is certainly in the interest of the banks, in one sense, that there should be an ample supply of paper currency and of stocks and securities which bear interest with limited obligations in regard to gold cover. But, apart from the fact that most bankers will take a broader view, there is a limit to the representation of wealth in such form because inflated currency means high prices and high prices mean in turn less safety for advances upon securities and materials. Copper, for instance, at a market value of 50 pounds (Sterling) per ton, is better security than copper at 100 pounds (Sterling) per ton. The financial stability of the world is undoubtedly best protected by the backing of as much gold as possible against paper securities and emergencies.

"With the solitary exception of gold, all commodities have risen, at least in the ratio of their increased cost of production. Fine gold (if we exclude the small amount now permitted to be used for trade purposes, which has risen to something like 115 shillings per fine ounce) has remained stationary at the standard price of 85 shillings per fine ounce. That the raw gold from South Africa is worth more than the price paid for it in paper currency is not a difficult matter to demonstrate in general terms. It is extremely difficult to assemble the data required to prove the amount of the increased value. That awaits solution. If we assessed its value according to the rates of exchange, it must be admitted that the Exchequer made a very profitable bargain. But the rates of exchange are not the true measure of its value, because it was used partly to regulate those rates, and without our gold the adverse exchanges would have been still higher.

"When peace is restored and trade once more flows into its natural

channels, it may be assumed that gradually rates of exchange will approximate to pre-war normal conditions, but there will be an intervening period, and perhaps a long one, before that happy stage can be reached. Meanwhile, the restoration of our position in this country would require as much gold as we can possibly attract to our mint."

The United States stands in the unique position of possessing more gold than any nation has ever before owned at one time, but if we are to perform the part that destiny seems to have laid out for us as the world's banker, it will without doubt be necessary to further increase our gold holdings and for this reason encourage to the fullest extent the production of that metal.

The end of the war will find the old world not only disorganized industrially, but with a volume—just how large no one can foretell—of paper currency that can only be compared with our own greenbacks in the years immediately following the contest between the North and the South. "The problem of the world's currency after the war," says a great economist, "is not of course decipherable at this time. It involves the question, 'When will the war end?'" There is little fear, however, that Europe will demonetize gold and carry out an economic revolution in changing the present standard, as it is evident that the effect of such a move would be almost as far-reaching as that of the war.

The enormous increase in credits and paper money circulating in every country of the globe is reacting very materially on the present and prospective supply of gold and it would seem timely to determine the relative influences of its supply on prices in general.

If prices and wages are increased, so far as they are paid in gold, it will require a proportionate amount of money to meet the higher costs. It follows as a matter of course that a larger circulation of money is required to meet the demand. While the quantity of gold available as money is seen to exert an influence in the direction of raising or lowering prices, it would seem equally certain that as international commerce progresses and the system of credits expands, an increased world's supply of gold is a matter of great importance.

It is true that in practice many transactions of buying and selling are set off one against another but there can never be a system of finance which could be carried on in a country operating under a gold standard without a basis of money somewhere. There is every indication that after the war there will be a general adoption of the gold standard by all nations throughout the world, which would very naturally lead to additional demands for the yellow metal. With the falling off in production of gold

and a material rise in gold prices, a very serious state of affairs confronts the world which is likely to affect the economic position of all peoples.

Prices in normal times zig-zag to meet the demand for and the supply of credit and gold. There is no way in which an additional supply of gold, coined as money, can be absorbed or utilized, except to meet rising prices or in regulating credits. The modern system of credit exercises an important economic influence on the general level of prices, which in turn very naturally reflect on national progress and human welfare.

The tendency to a further rise in prices is likely to continue for many years; the increase in the cost of living, and the importance of adjusting wages to prices; the enormous volume of war contracts involving the payment of money; the increasing obligations of nations extending over long periods; the problems of a universal standard of values; the development of commerce and banking; the growth of population and wealth, are questions which are becoming of increasing importance as time runs on.

We are at the dawn of a bigger financial and commercial tomorrow and while the situation is fraught with a great many difficulties, because there are no precedents for us to follow, we must face conditions as they exist and through frank and free discussion arrive at a practical and sound solution.

THE NEED FOR GOLD AND THE PROBLEM OF THE GOLD MINER

*It has been estimated by Hennen Jennings that the gold reserve of the world of December, 1917, approximated \$10,000,000,000. In terms of the pre-war indebtedness of the combined belligerents the gold reserve was 35%, whereas in December, 1917, it represented but 8%. The ratio of the gold reserve of the world to the superimposed war debt of the belligerents, was therefore, in December, 1917, as 1 to 12½.

The gold reserve of the United States on June 29, 1918, amounted to \$2,478,221,424, of which we gained through the last four years, \$1,047,920,000, or 42.3%.

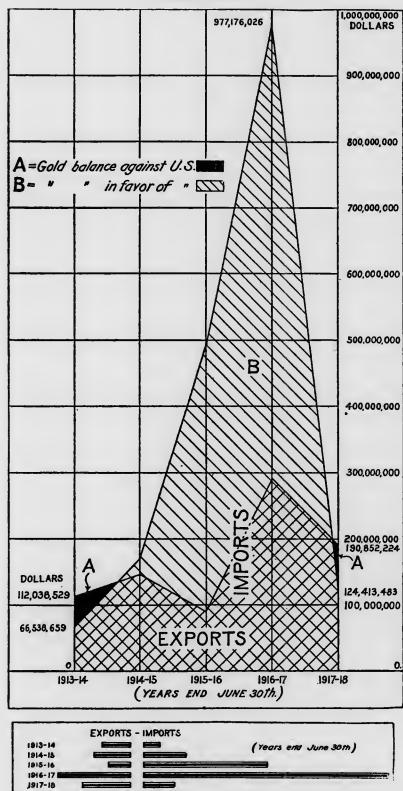
Total Gold Reserve in U.S. Treasury, June 29th, 1918.	
GOLD BALANCE for four war years - June 30th 1914 to June 30th 1918. (In Favor of U.S.)	

During the fiscal year ending June 30, 1914, we exported \$45,499,000 more gold than we imported, so that there was a balance against the Treasury in that amount. In the year immediately following the war the gold balance in favor of the United States was roughly \$25,000,000, or a gain of 17% over the exports, and the year 1915-16 was some \$404,000,000 in our favor, a gain of 447% over the exports, and \$685,000,000 was the gain to the Treasury for 1916-17, which is 234% in excess of our exports. We had gained a total for the three war years of \$1,114,000,000, but due to the fact that this last year, 1917-18, ending June 30, we had lost \$66,438,741 of gold coin and bullion by exportation, our net gain of imports over exports for the four war years was but 145.7% as compared to 210.9% for the first three years, showing the depreciating effect on the gold reserve due to a negative quantity in the last year.

The ratio between the gold reserve of the United States and government indebtedness on June 30, 1918, was about 1 to 5, and at the end of this fiscal year the ratio will be about 1 to 12½ of the then superimposed debt of the nation. The United States is, therefore, eighteen months in

*The condensed address before the Pacific Coast Bankers Conference, Portland, Oregon, presented by H. N. Lawrie, September 6, 1918.

GOLD EXPORTS AND IMPORTS OF THE UNITED STATES, FISCAL YEARS 1914-1918
CHART NO. 1



Complete data for above charts will be found on page 28

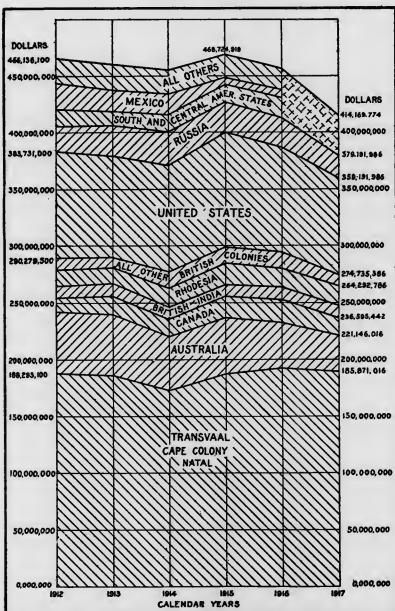
the lead of the world at large in respect to the gold ratio to superimposed debt, a fact which predetermines the position of this country as the world's banker. I have, however, touched upon this subject principally to show the influence of an added new gold production, which normally is some \$100,000,000, to the Treasury gold reserve of the United States. It would seem to be a very trivial amount but in terms of expanded credit on the basis of the ratio of gold to national debt on June 30, 1919, \$100,000,000 of new gold will sustain a credit of \$1,250,000,000, which is over 80% of the value of the 1917 cotton crop.

The government, recognizing the need for conserving the gold reserve, has taken several precautions to protect it. First the concentration of gold through the Federal Reserve Bank to the Treasury, thereby removing the coin from circulation. This was done at a timely moment and there is thought to be very little gold coin not now under cover. The second precaution that was taken was the recent fixation of a price on silver of \$1.015 per ounce to stimulate production. An embargo was also placed on silver and as the silver reserve increases, some \$358,000,000 of outstanding silver certificates are being called in and destroyed. This was done so as to release silver bullion for shipment to India and the Orient to take care of our trade balances in place of sending gold, which is not so acceptable in these countries as silver and we thereby conserved our gold reserve. And, too, the possible loss by submarine was obviated. *The third safeguard of the gold reserve is now being considered and has to do with the restriction of the sale of gold to the trade for the manufacture of jewelry. Since over a half of our output for 1917 was consumed in this way the importance of such action at this time cannot be overestimated.

The United States in 1792 began the coinage of gold on a free mintage basis, giving the miner back his full weight in pure gold without any seigniorage or tax deduction. At this time the gold coin contained eleven parts of pure gold and one of alloy. In 1795 the Treasurer retained four cents per ounce for gold minted. In 1800 an amount was retained to cover the cost of refining the impure bullion. On June 28, 1834, one-half of 1% was retained for mintage, if paid for in coin within five days of the presentation of bullion. In 1837 the coin was made nine-tenths pure gold and one-tenth alloy. In 1873 the charge was one-fifth of 1% for converting standard gold bullion into coin. All charges for the coining of gold were removed in 1875 and it was not until 1900 that gold was officially

*The government has since passed some very excellent restrictions which regulate the sale of gold to the trade. The tremendous increase in the amount of gold sold to the trade this year over last year suggested the possibility of hoarding, which has now been definitely checked.

GOLD PRODUCTION OF THE WORLD, CALENDAR
YEARS 1912-1917
CHART NO. 2



PRODUCTION COMPARISON 1915-1917



Complete data for above charts will be found on page 28

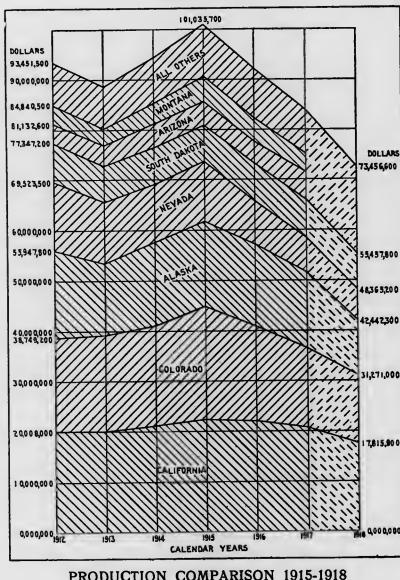
adopted in the United States as the standard unit of monetary measurement, in which it was specified that 23.22 grains of fine gold should be equal to the standard dollar and which gives to the ounce a price fixed at \$20.6718.

Since gold was first adopted by England as the sole unit of monetary measurement in the early part of the nineteenth century, there never has entered into the price of gold the problem of the cost of production and for the reason that necessity has never forced the issue. That government price fixation cannot long break down the law of supply and demand applies as well to gold as to any other commodity. Because of the artificial price which has been fixed on the gold ounce we are now confronted by a too limited volume of this product to supply the demand and at the same time the output is declining rapidly. The only reason why this arbitrary price for gold has remained stationary for so long a period, is because of the fact, that it has been high enough to maintain a volume of new production which has kept pace with the continually increasing pre-war demands for gold exchange.

The decline in the gold production of the world has been roughly from \$469,000,000 in 1915 to \$414,000,000 in 1917, showing a loss for the two years of \$55,000,000, or approximately 12%. The production of the United States has declined from roughly \$101,000,000 in 1915 to \$84,000,000 in 1917 or 17%. So that, when you analyze the decline of the world's gold production for the years 1916 and 1917 it is found that the loss of production in the United States has been one of the chief contributing factors in the production loss of the world. This means that the economic pressure in this country due to the war has been greater than it has been in the countries more remote from the center of war. In South Africa, which contributes about 45% of the gold output of the world, there is a different class of labor which was not so heavily drawn upon for the exigencies of war and the operation of their mines on account of the remoteness of the locality from the center of manufacture depends upon the storage of large amounts of supplies considerably in advance of their need. For these reasons the decline in the production of this district did not take place until 1917 and then not so extensively as here. But it is believed that now the declines are becoming very much more serious in the British Colonies than they have been heretofore. Australia has progressively declined in gold output since 1912. British India has about kept her production constant. Canada's production has increased since 1912 until this last year when the same economic pressure to which the production of the United States has yielded forced a decline for 1917. Russia maintained her output until this last year when it

GOLD PRODUCTION OF THE UNITED STATES,
CALENDAR YEARS 1912-1918

CHART NO. 3



PRODUCTION COMPARISON 1915-1918



Complete data for above charts will be found on page 29

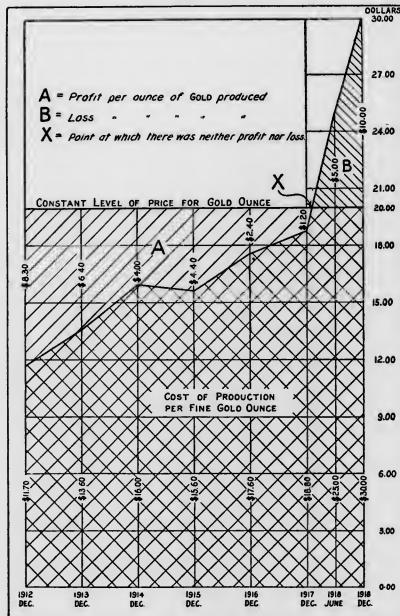
decreased from some \$26,000,000 in 1916 to \$20,000,000 in 1917. The South and Central American States have increased slightly their gold yield, while the production of Mexico has declined from \$24,000,000 in 1912 to \$6,000,000 in 1916, which reflects an industrial chaos due to turbulent internal affairs.

In the United States the decline in production from 1915 to 1916 was 8.3% and from 1916 to 1917 was 8.8%. There are six states and the Territory of Alaska that have for the last six years produced approximately 90% of the gold of this country. They are in the order of their production, California, Colorado, Alaska, Nevada, South Dakota, Arizona and Montana. For the last two years California declined in 1916 from 1915, 2%; in 1917 from 1916, 5.9%; the decrease for Colorado for 1916 was 15.6%, and for 1917, 16.1%; Alaska, 2.8 and 6.6% respectively; South Dakota gained 1.5% in 1916 and lost 1.6% in 1917; Arizona lost 3.9% in 1916 and gained 0.4% in 1917; and the gold production of all the other states and dependencies combined decreased 3.5% in 1916 and 1.4% for 1917. It will be apparent from these figures that the placer mining areas have been the ones that have withstood the economic pressure, much more readily than the quartz mining states, for the reason that labor enters into the operation to a less extent in placer than in quartz mining. That accounts for the fact that California and Alaska have maintained their output while Colorado and Nevada have suffered such heavy declines. The production of South Dakota has about kept constant because the Homestake Mine is a uniform producer and contributes practically the whole gold output of this state. In Arizona production has increased on account of the fact that much of the gold is derived as a by-product of copper the price for which has encouraged an increase in copper output.

It is interesting to know that of the total gold production of the world for the six years, 1912-17, Great Britain contributed 63.4%, the United States 20.3%, and all other countries combined 16.3%. For the year 1913, the Allies produced 91.3%, the Neutrals 8.1% and the Central Powers 0.6% of the total gold production of the world.

Attention has already been attracted to the decline in the gold production of the United States for the years 1916 and 1917 of \$17,000,000 and I have just received information from the Director of the Geological Survey that the decline for 1918 will be \$11,000,000, based upon the estimated decline for the first six months of 1918. But the operators know that this estimate is very conservative and that unless substantial aid is given the industry the decline for the last six months of 1918 is more likely to be twice the decline for the first six months. The gold output

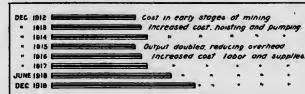
**WAR INFLUENCE ON THE COST OF PRODUCTION
PER FINE GOLD OUNCE, TYPE EXAMPLE
CHART NO. 4**



Gold Recovered Per Ton of Ore



Total Cost of Mining and Recovery per Ton of Ore



Complete data for above charts will be found on page 29.

22

for 1918 will probably not exceed \$65,000,000 as compared to \$101,000,000 in 1915. Many operators are carrying their production now at a loss, so as to keep their mine from getting into a condition where it would require large sums of money to reclaim it by pumping, re-timbering, etc., and in a patriotic sense to maintain their output until the government does something for their relief. They have confidence that the government will.

In order to give you an adequate idea of the costs and yields of gold mining I will cite the following examples which were used by Hennen Jennings, consulting engineer for the United States Bureau of Mines, in his publication entitled "The Gold Industry and Gold Standard":

"The yields and costs vary in different districts and in different mines in each district. The greatest gold producers have been mines of low or moderate yield per ton, but with great mass occurrence and good conditions for economical working. The best example of such mining is the Homestake mine in South Dakota, which has been working since 1875, and has produced over \$147,000,000, the ore not averaging over \$4.00 a ton and costs ranging from \$2.50 to \$3.00 per ton, with dividends \$40,000,000, or 27% of the output.

"The records of the Alaska Treadwell group of mines started in 1885, and brought up to June, 1916, showed there had been crushed and treated 26,000,000 tons, yielding \$63,000,000, or \$2.37 per ton, and at a cost of \$1.42 per ton. The workings were extended to a depth of 2300 feet. Some of them were under the sea, and the majority of the mines were flooded with water on April 21, 1917, and are now closed.

"Lower yields and lower costs have been obtained by the Alaska Juneau Company and the Alaska Gold Mines, which are only a few miles distant from the Alaska Treadwell Mines. Working on a large scale has been started only recently at these mines. In 1916 the Alaska Gold Mines crushed nearly 2,000,000 tons, giving a yield of \$0.97 and at reported costs of \$0.73. The Alaska Juneau's large mill has only recently been put into operation. It is anticipated their yields and costs will be still lower. These are the lowest yields and costs known in gold mining. Hydro-electric power is used and all natural conditions ideal for cheap working.

"The Mother Lode in California, on which a ten stamp mill was started in 1852, has been prospected or worked over an area of 125 miles, and has produced, according to estimates, over \$230,000,000 in gold. At two of the mines shafts have been sunk to vertical depths over 4000 feet. Many mines, however, have been abandoned at moderate depths owing to failure to make them pay. The early returns per ton from the Lode

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were much higher than recent returns, which do not average over \$4.00 per ton. Some old abandoned mines have lately been opened up again and by hydro-electric power and better system of mining and management, made to yield substantial profit.

"A notable case is that of the Plymouth Consolidated Mines, in Amador County, on the Mother Lode, re-opened after an idleness of 24 years, liberally equipped by capital and costs reduced to about \$3.00 per ton.

"The North Star Mine in California, is a good illustration of a persistent but narrow vein of quartz, worked under good management and being made to pay moderate profit for a very long period. The mine was discovered in 1851, and since then to 1917 has produced 1,470,000 tons, yielding \$18,610,000 or an average of \$12.66 per ton. The total dividends have amounted to \$5,137,000, or about 35% of the yield. The returns for 1916 were \$10.42 per ton with costs at \$6.26 per ton.

"An example of very rich yield, but with short life, is found in the case of Goldfield Consolidated Mines, Nevada. Here, within eight or nine years \$50,000,000 has been taken out, but the yield fell from \$38.50 a ton in 1910 to \$7.52 in 1916. The costs must have been moderate on account of the magnitude of the lode.

"The Portland Mine, in Colorado, is another rich telluride mine. It has produced over \$40,000,000, with an average yield of \$27.00 per ton. The dividends have not amounted to over 20% as a great amount of development, dead work, and costly mining and reduction have been necessary."

England has a gold commission that has been for some time investigating the crisis in gold mining. The United States has a similar committee and it is thought that this committee may be endowed with the power of making certain payments to the producer to cover the increased cost of production during this crisis, quite separate from the monetary price paid by the mint. In order to make certain of having sufficient copper, a price was fixed on copper which would encourage the development of that industry. The gold industry needs the same direct assistance, if the normal output of gold is to be maintained.

To protect the present gold standard through the crisis of the war will secure for the Allies the most favorable adjustment of indemnities; it will ensure a superior basis upon which to erect the credit-structure necessary for the work of reconstruction after the war; and will serve as a most effective means of controlling the economic expansion of the Central Powers in the interests of humanity.

At the Bankers' conference held in Portland, Oregon, September 5, 1918, the following resolution was unanimously adopted:

WHEREAS, Secretary of the Treasury William G. McAdoo has called the attention of the country to the necessity for the largest possible output of gold, in order that the credits of the country may be stabilized, and

WHEREAS, Reliable statistics show that the gold production of the world declined from \$469,000,000 in 1915 to \$414,000,000 in 1917, and that of United States from \$101,000,000 in 1915 to \$84,000,000 in 1917, with a still further decline for 1918, estimated by reliable authorities to be \$11,000,000 based upon the production for the six months ending June 30, 1918, and

WHEREAS, This decline in production is due largely to the fact that the cost of producing the gold ounce as a commodity has exceeded the fixed monetary price of \$20.6718 per ounce for the major portion of the domestic gold produced, now therefore be it

RESOLVED, By the bankers here assembled that they heartily approve of the appointment by the Secretary of the Interior of a committee to study the increased cost and the decreased output of gold in order that the gold production of the United States may be maintained at its pre-war volume, and be it further

RESOLVED, That the chairman or secretary of this convention be instructed to present these resolutions to the American Bankers Convention to be held in Chicago, commencing September 23, 1918.

The resolution as passed by the Bankers' conference held in Portland September the 5th, 1918, was endorsed by the delegates from the Twelfth Federal Reserve District attending the Chicago convention September, 1918.

Prominent bankers of Denver, headed by Mr. J. C. Burger, president of the Hamilton National Bank of Denver, joined with us in presenting to the resolutions committee of the American Bankers Association, the following resolution, which was unanimously passed September 27, 1918:

Resolution passed by American Bankers Association, held in Chicago September 27, 1918:

WHEREAS, The gold production of the world is rapidly decreasing, and WHEREAS, The only form of relief that will prove effective and can be applied promptly, is action by the United States Government in such form and by such methods as may be deemed fit and proper under the circumstances, and

WHEREAS, Gold is the standard of value and the basis of all credit, and it is vitally important to the financial and commercial life of the nation and of the world; now, therefore, be it

RESOLVED, That the American Bankers Association in convention assembled, respectfully request and urge upon the government of the United States the desirability of maintaining the production of gold to at least its pre-war volume, and ask that steps be taken immediately to that end; and be it further

RESOLVED, That the secretary of this Association be, and he hereby is instructed to send a copy of this resolution to the President of the United States, Secretary of the Treasury, and Secretary of the Interior, advising them of its adoption; and be it also further

RESOLVED, That considering the great importance of this subject, this convention recommends to the Executive Council that the matter be referred to the Federal Legislative Committee and the Currency Commission for an exhaustive study and such action as may be deemed necessary.

COMPLETE STATISTICS

Pages 28 and 29

GOLD IMPORTS AND EXPORTS OF THE UNITED STATES
Fiscal Years 1914-1918

GOLD PRODUCTION OF THE WORLD
Calendar Years 1912-1917

GOLD PRODUCTION OF THE UNITED STATES
Calendar Years 1912-1918

INFLUENCE OF THE WAR ON THE COST OF PRODUCING THE DOMESTIC
GOLD OUNCE—Type Example

GOLD IMPORTS AND EXPORTS OF THE UNITED STATES. FISCAL YEARS 1914-18. DATA FOR CHART No. 1

Years End June 30	Exports	Imports	Gold Balance in Favor of U. S.	Gold Balance in Favor of U. S. Over Exports
1913-14	\$112,038,529	\$66,538,659	\$45,499,870	+40.6%
1914-15	122,224,148	171,568,755	.....	+17.3%
1915-16	90,145,456	49,265,626	40,779,500	+42.7%
1916-17	281,921,225	97,176,026	685,254,978	+234.7%
Total three war years	.....	.....	.....	.....
1914-17	\$152,394,024	\$1,649,754,024	\$1,114,359,161	+210.9%
Total four war years	190,832,224	124,413,483	666,458,741	+34.8%
1914-18	719,247,145	\$1,787,167,565	\$66,458,741	\$1,047,920,420
				+145.7%

United States gold reserve (gold coin and bullion) in the Treasury on June 29, 1918, was \$2,478,221,424, of which \$1,047,920,420, or 42.3% represents the gold balance in favor of the United States for the four war years, ending June 29, 1918. The statistics for 1914-17 are from official records of the Department of Commerce; those for 1918 are reported by the Director of the Mint.

GOLD PRODUCTION OF THE WORLD. CALENDAR YEARS 1912-17. DATA FOR CHART No. 2

	1912	1913	1914	1915	1916	1917
South Africa	\$188,293,100	\$181,885,500	\$173,560,000	\$188,035,156	\$192,882,902	\$165,751,016
Australia	54,509,400	55,115,300	46,019,000	52,259,500	50,753,753	50,000,000
Canada	10,000,000	10,000,000	12,924,000	18,971,601	18,234,978	15,549,126
British India	11,055,700	12,178,000	11,378,400	11,522,457	11,206,509	10,744,882
Rhodesia	14,226,900	14,274,700	17,423,100	15,915,324	19,232,165	14,552,462
Other colonies	9,545,600	11,876,800	11,782,000	12,387,163	11,820,705	10,424,800
British total	\$290,279,500	\$289,921,100	\$276,996,700	\$268,824,171	\$293,866,011	\$274,755,386
Increase or decrease	.....	.....	.....	.....	.....	.....
United States	93,451,500	88,884,400	94,531,800	101,035,700	92,590,300	84,456,600
Increase or decrease	.....	-4.9%	+6.3%	+6.3%	-3.3%	-8.3%
Russia	22,199,000	26,507,800	28,587,000	26,322,746	26,322,746	20,000,000
South and Central America	14,956,100	13,020,700	14,775,700	17,185,841	18,097,224	.....
Mexico	24,500,000	19,308,800	19,308,800	6,559,275	7,690,707	.....
All others	20,750,000	22,298,300	21,476,800	18,847,178	18,847,178	.....
Total	\$82,405,100	\$81,185,600	\$84,148,100	\$68,865,040	\$70,529,733	\$15,457,778
Increase or decrease	.....	-1.5%	+3.7%	-18.1%	+2.4%	-22.0%
World total	\$466,136,100	\$459,941,100	\$455,676,600	\$468,724,916	\$457,006,045	\$414,169,744
Increase or decrease	.....	-1.3%	-0.9%	+2.9%	-2.5%	-9.4%

Of the total production of the world for the above six years, Great Britain contributed 63.4%, the United States 20.3%, and all other countries 16.3%.

For the year 1913 the Allies produced 91.3% of the gold of the world, the neutrals 8.1%, and the central powers 0.6%. (Computed by Hennen Jennings.)

Statistics, 1912-1916, Records of U. S. Mint; for 1917, 'Mining and Scientific Press,' May 4, 1918.

*Mining Magazine, May 1918, †By difference.

Percentages of increase or decrease computed from year to year.

GOLD PRODUCTION OF THE UNITED STATES. CALENDAR YEARS 1912-18. DATA FOR CHART No. 3

	1912	1913	1914	1915	1916	1917
California	\$20,005,000	\$20,130,000	\$21,011,000	\$22,147,400	\$22,110,300	\$20,815,900
Increase or decrease	.....	+1.2%	+5.0%	+6.1%	-2.0%	-14.4%
Colorado	18,741,200	18,199,700	19,902,400	22,550,800	19,009,100	15,855,100
Increase or decrease	.....	-3.1%	+2.3%	+13.6%	-11.1%	-17.6%
Alaska	.....	17,198,600	15,201,300	16,547,200	16,710,800	15,171,300
Increase or decrease	.....	-11.8%	+8.8%	+8.5%	-2.8%	-6.6%
Nevada	13,375,700	11,977,400	11,538,200	11,884,700	8,184,200	5,822,400
Increase or decrease	.....	-10.7%	+5.3%	+3.0%	-29.0%	-17.9%
South Dakota	7,823,700	7,214,200	7,334,000	7,403,500	7,512,200	7,392,600
Increase or decrease	.....	-7.8%	+1.7%	+0.9%	+1.5%	-1.6%
Arizona	3,785,100	4,184,100	4,452,500	4,452,500	4,452,500	.....
Increase or decrease	.....	+8.4%	+11.4%	-0.3%	-3.9%	+26.4%
Montana	3,707,900	3,320,900	4,143,600	4,978,300	4,575,400	3,756,500
Increase or decrease	.....	-10.5%	+20.6%	+20.5%	-8.5%	-10.6%
All others	8,011,000	8,124,200	9,217,600	10,126,100	10,060,500	8,908,500
Increase or decrease	.....	+1.2%	+16.1%	+12.7%	-3.5%	-11.4%
Total U. S.	.....	93,451,500	88,884,400	90,531,800	810,035,700	892,316,100
Increase or decrease	.....	-1.9%	+6.3%	+6.9%	-8.3%	-13.0%

*By difference.

Of the total gold production of the United States for the six years, 1912-17, the seven states listed have contributed 90%, the remainder coming from all other states and dependencies of the United States. The statistics for 1912-17 are from the final records of the U. S. Geological Survey. The percentage increase or decrease is computed from year to year. The estimates for 1918 are based upon estimates of the U. S. G. S. for six months ending June 30, 1918. Increases in Arizona and Montana offset losses in Utah, Idaho, and New Mexico.

INFLUENCE OF THE WAR ON COST OF PRODUCING THE DOMESTIC GOLD OUNCE. TYPE EXAMPLE DATA FOR CHART No. 4

Monthly Output	Gold Recovered	Gold Recovered	Total Cost Per Ton	Total Cost for 12 Months	Profit or Loss for Month	Total Cost Per Gold Ounce	Profit or Loss Per Gold Ounce
Month, Year	Per Ton	Per Ton	Per Ton	for 12 Months	for Month	Per Gold Ounce	Per Gold Ounce
Dec. 1912	3,000	\$12.00	1.80	\$21,000	+\$15,000	\$11.70	+\$8.30
" 1913	3,000	11.00	1.650	7.50	22,500	13.60	+\$6.40
" 1914	3,000	10.00	1.500	8.50	24,000	15.00	+\$6.00
" 1915	3,000	9.00	1.400	7.00	24,000	12.00	+\$4.40
" 1916	6,000	8.50	2,550	7.50	45,000	+\$6,000	+\$2.40
" 1917	6,000	8.50	2,550	8.00	48,000	13.00	+\$8.00
June 1918	6,000	8.00	2,400	10.00	60,000	12.00	+\$5.00
Dec. 1918	6,000	8.00	2,400	12.00	72,000	-21,000	-30.00

The above data represent a type example of a medium-grade gold-quartz mine. It takes into consideration the economic factors over this period of time. The whole numbers are used to simplify the presentation, and the price of \$20 for the gold-ounce also simplifies the calculations. Many properties in 1914, working on a narrow margin of profit, were forced to enlarge their scale of operations as did this one. At this time wages were reasonably priced, and the cost per ton was well below the economic limit, and these facts combined account largely for the increase in the gold-output of the United States which was recorded in 1915.

The compilation and computation of these tables and the chart designs were made by H. N. Lawrie. Through the courtesy of the Mining & Scientific Press, the charts and data tables included in the author's "Review of the Gold Problem" published by them are herein presented.

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